Canadian Centre for Occupational Health and Safety

Centre canadien d'hygiène et de sécurité au travail

Community Right-to-Know Legislation in Canada

Implications for Public Health Units

P87-13E

88-02173/

COMMUNITY RIGHT-TO-KNOW LEGISLATION IN CANADA

Implications for Public Health Units

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September 1987

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This publication is available in both official languages.

Cette publication est disponible dans les deux langues officielles.

CCOHS NUMBER P87-13E
ISBN 0-660-12659-1
DSS CATALOGUE NUMBER CC273-2/87-13E

Published 1987

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INTRODUCTION

In North America during the past decade, workers and communities have increasingly demanded to know the hazards present in their work and neighbourhood environments. Pertinent legislation has been passed in numerous American jurisdictions and has been presented in several Canadian ones. The "worker right-to-know" legislation, as this legislation is termed, will have its primary impact on the occupational setting, whereas that involving "community right-to-know" may have broader implications. This paper focuses upon the implications that community right-to-know legislation might have specifically on public health units in Canada.

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1. LEGISLATIVE BACKGROUND

During the past two decades, the number and volume of chemicals used in North American industry have increased dramatically. Over 56,000 chemicals are currently approved for use and approximately 1,000 new ones licensed annually in the U.S.A.[1,2] As many as 6,000 of these may be regarded as hazardous substances with a potential for acute toxic, chronic toxic, mutagenic, teratogenic or carcinogenic effects.[3,4] During the past twenty years workplace disasters have occurred (eg. in Seveso and Bhopal) which have spurred on the demands of labour, community and environmental groups for information on workplace hazards.

USA/Europe

Most right-to-know legislation has arisen in the United States where, since 1980, nearly half the states and several municipalities have passed pertinent laws.[5,6,7,8] These have often been more stringent than the regulations of the federal OSHA Toxic Substance Communication Rule of 1982.[9]

The joint European community "Seveso Directive" of 1982 indicates cautious movement towards worker and citizen access to industrial hazard information. It commits each of the member nations to establish an enforceable system of accident hazard control, risk communication and emergency planning by the end of the decade.[10]

Canada

In Canada during the past few years, there have been several developments with regard to the right-to-know movement.

Federal

The efforts of the federal government in the right-to-know arena have centered on the development of the Workplace Hazardous Materials Information System (WHMIS) proposal.[15] Established in 1982 by Labour Canada, the Steering Committee of this joint federal-provincial project comprised representation from industry, organized labour and the federal and provincial governments. Under the direction of the Steering Committee, the project working groups carried out extensive consultations with appropriate parties in order to develop:

- the technical criteria to evaluate and classify hazardous materials,
- a mechanism to protect genuine trade secrets, and
- a suitable information delivery system.

In its final report, the committee presented its recommendations.[15] The proposed information delivery system is to include three components for all hazardous materials:

- A label meeting specific requirements is to be attached to all containers bearing hazardous materials.
- A Material Safety Data Sheet (MSDS) containing prescribed information is to accompany all hazardous materials provided by a producer/supplier.
- A Worker Education Program regarding workplace hazard prevention and control is to be provided in each work site where a hazardous material is used.

Employers will be obliged to make MSDSs available to employees and, upon request, the supplier is to identify the sources of toxicological data that were used in preparing them. If the trade secret provision limits disclosure of the ingredients of a hazardous material, the supplier is still obliged to furnish the same degree of hazard information as would be furnished if the ingredients were disclosed.

On June 30, 1987, Parliament amended the Hazardous Products Act and the Canada Labour Code.[16]

This legislation represents significant progress toward worker right-to-know, however, it includes no provision for the transmittal of hazard information to the community. Provincial and/or municipal legislation will need to be developed to supplement the WHMIS regulations.

Provincial

The occupational health and safety legislation in most provinces obliges employers to provide information to and protect the health and safety of workers. However, as information regarding the composition and hazards of workplace chemicals is at times not provided to employers by the producers or suppliers, the employers are, in practice, often exempted from this responsibility to inform workers. Occupational health officials in several provinces are attempting to correct such weaknesses in their legislation. In Ontario, for example, on June 29, 1987, Bill 79, an Act to amend the Occupational Health and Safety Act,[4] became law.

This bill, which complements the federal legislation, establishes a framework for the definition of hazardous substances and physical agents. It requires that all manufacturers/distributors/suppliers of such substances label them appropriately and provide employers with current Material Safety Data Sheets (MSDS). Employers must maintain a current inventory of all hazardous substances present, used, handled or stored in the workplace. They must possess an unexpired MSDS for all such substances and identify the locations of these substances in the workplace. The inventory and MSDSs are to be made available to employers and furnished to the joint health and safety committee, the Ministry of Labour, the local fire department and the Medical Officer of Health (MOH) responsible for the area in which the workplace is located. The

MOH, in turn, is to make the most recent versions of the inventories and MSDSs available for public inspection. The bill establishes a mechanism for dealing with trade secret claims, and obliges the employer to also provide worker instruction and training with respect to those hazardous materials present in the workplace.

Municipal

Since 1985 the cities of Vancouver, Toronto and Windsor have prepared community right-to-know bylaws.

Vancouver City Council has implemented a bylaw that requires specific public announcements when pesticides are used in public facilities or on public land or when used in or around multiple dwellings. The bylaw is administered by the Department of Public Health.

During 1985 both Toronto and Windsor proposed bylaws respecting a wide variety of hazardous chemicals.[11,12,13] Both bylaws were to require businesses using more than a prescribed amount of one or more of these substances to submit an annual statement regarding the identity, quantity, and uses of the chemicals. In Toronto, the public was to obtain this information from the Department of Public Health while, in Windsor it was to do so from the City Clerk's office. Both proposed bylaws required provincial enabling legislation for implementation. With the passage of Ontario's Bill 79 in 1987, both have since expired on the order table.

2. COMMUNITY RIGHT-TO-KNOW

It appears probable that within the next several years some information regarding hazardous workplace substances will be available to citizens in a number of Canadian communities. It is not yet clear, however, in what form or how this information will be provided, to what use it will be put or what demand will be experienced for it.

Nature of the Information

As previously stated, Ontario's Bill 79 requires that an inventory of all hazardous workplace materials and their MSDSs be furnished to a number of recipients, including the local Medical Officer of Health. It does not oblige the employer to disclose the use or quantities of the material in the workplace nor the emissions of the material from it. Hence, an estimation of the risk to those persons living in the adjacent community that is based solely on industrial inventories would be necessarily crude.

Transfer of the Information

Ontario's Bill 79 will be administered by the Ministry of Labour, but inventories of hazardous materials will be provided directly to local MOHs by employers on an annual basis.

Other mechanisms for the flow of hazardous substance information to the community, however, are possible. If only an inventory is to be provided, individuals might obtain it directly from an employer, the Ministry of Labour or, as in some U.S. jurisdictions, the local fire department. Such schemes do not facilitate the appraisal of the health hazard posed by workplace materials that might be available if the inventories were presented by a Medical Officer of Health. Alternatively, the inventories might be provided only to a single central body, such as the Ministry of Labour, to which an MOH could direct an inquiry on behalf of a community member. Though centralizing the data collection function, this alternative may make unacceptable demands on the Ministry of Labour, and make Medical Officers of Health dependent upon it.

From the point of view of a community and its Medical Officer of Health, having inventories pass directly from the employer to MOH may be the most attractive alternative. The MOH, in principle, could provide the inquirer with an interpretation of the risk posed by a particular inventory. Furthermore, such an inventory could allow the MOH to monitor occupational and environmental health hazards in the community. The MOH would be in a position to identify potential problems before they develop.

Use of the Information

In principle, information obtained through a community right-to-know law might be used by an individual to assess the risk of accident or illness from living near a particular workplace. The person or family's behaviour might then be able to be modified to reduce this risk. Critics of community right-to-know provisions argue, however, that risk assessments will be too crude to be meaningful, that trade secrets may be divulged in the process and that companies may be unwittingly leaving themselves open to industrial terrorism. Of these concerns, only that of trade secrets appears to have been well addressed in the currently proposed legislation.

Demand for the Information

Estimates of the demand for workplace hazardous substance information by the community are scarce. In October, 1985, the City of Toronto undertook a mailed questionnaire survey of 50 randomly selected businesses and 34 interested labour and community groups. The response rate was low, with only 30% replying from businesses and 23% from labour and community groups. Of the businesses responding, 47% claimed they would use the service, at frequencies varying from 1 to 25 times per year, whereas nearly all the labour and community groups anticipated they would use the information service at frequencies that varied from 5 to 150 times per year.[12] The experience of American jurisdictions with community right-to-know laws may also indicate the demand that can be expected for this information. The City of Philadelphia, for example, receives up to 500 requests per year. Over half of these inquiries, however, are from householders concerned about the use of kerosene space heaters by their neighbours (Philadelphia City Clerk's office, personal communication). One might expect the demand for hazardous substance information to vary considerably between communities depending on their degree of industrialization and activism. As well, it is to be expected that the demand might vary with time, according to current community concerns.

3. IMPLICATIONS FOR PUBLIC HEALTH UNITS

Management of the Information

In at least some provinces, then, it seems probable that the Medical Officer of Health will be the agent through which a community will have access to information on workplace hazards. Furthermore, it is likely that the information provided to the MOH will involve at least an inventory of all hazardous materials present in workplaces within the jurisdiction.

Public health units can anticipate a regular inflow of inventory information. In Ontario, for example, the recent legislation requires that an employer annually provide the MOH with an updated inventory. The volume of this information will depend on the nature of the local industries and the rate of change in their inventories.

In the near future, at least, this information could be expected to arrive in printed form. Files would need to be established or updated on each occasion. Public health units having considerable industry within their jurisdictions will undoubtedly wish to consider entry of these data into their present computer system or into one they would purchase for this purpose. One might eventually foresee the transmission of this information from the employer to the MOH in electronic rather than printed form.

Interpretation of Inventory Information

Basic Resources

Community right-to-know legislation may, like Ontario's Bill 79, be limited to requiring the MOH to make the inventories and MSDSs available for public inspection. However, to correctly interpret these and provide inquirers with an appropriate risk assessment, the Medical Officer of Health may well require additional resources.[17]

A sizeable portion of the hazardous materials appearing on the inventories can be expected to be mixtures identified only by their trade names. The MOH will need to refer to the Material Safety Data Sheets of these mixtures to determine the materials' composition and basic toxicity. An MSDS provides fairly complete information regarding the chemical hazards (such as the explosiveness and reactivity) of a substance. However, it generally provides minimal data on its toxicity. Hence, additional toxicological data sources will be required.

At the least, the MOH will require access to comprehensive, up-to-date textbooks of toxicology. The MOH might make use of the Inquiries Service at the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton. This service presently responds to over 40,000 inquiries per year from individuals in industry, labour and the community. At no charge to the inquirer, the service can research a question and reply orally or in written form within two to three weeks. Its mandate is, however, to address occupational health concerns and not those related to environmental or public health issues.

Toxicology Data Bases

Those health units with a microcomputer and communications equipment can utilize a number of other toxicology data sources. Several online data bases can provide ready access to comprehensive toxicological information.

The CCOHS provides, at no charge other than a telecommunication fee, a data base package named CCINFOline that is available in both French and English. This package has several components:

- TRADE NAMES, a data base containing the complete MSDSs on over 30,000 products and will eventually contain over 100,000 MSDSs.

- CHEMINFO, a developing fact-retrieval data base for pure chemical substances and mixtures. It includes information summarized from current literature regarding the acute toxic, chronic toxic, reproductive, mutagenic and carcinogenic effects of the substances. At present it contains approximately 700 records and is expected to grow substantially over the next several years.

- NIOSHTIC, a comprehensive bibliographic data base with approximately 136,000 records prepared by the National Institute for Occupational Safety and Health in the U.S.A.

- CISILO, an international bibliographic data base of 28,000 records prepared by the International Labour Office in Geneva. Both CISILO and NIOSHTIC data bases are limited to health issues in the occupational rather than environmental setting.

- RTECS, the Registry of the Toxic Effects of Chemical Substances, is a fact retrieval data base containing detailed toxicological data on some 89,000 chemicals that is updated annually by NIOSH.

- CASE LAW, a data base containing summaries of cases and decisions related to occupational health and safety for jurisdictions across Canada. Information on the cases includes, for example, jurisdiction, forum, year and a summary. Data are contributed by the organizations which actually prepare the summaries.

- FATALITY REPORTS, a data base containing information about the circumstances surrounding occupationally-related fatalities. Data are taken from reports on inquests and inquiries into occupationally-related fatalities across Canada.

- RESOURCE ORGANIZATIONS, a data base providing a directory of Canadian organizations involved in the field of occupational health and safety.

- RESOURCE PEOPLE, a data base providing a directory of Canadians involved in the field of occupational health and safety.

- CANADIAN STUDIES, a data base providing a directory of recent Canadian studies in the field of occupational health and safety.

- CANADIANA, a data base providing annotated references to occupational health and safety documents published in Canada, about Canadian subjects, and by Canadian authors. It includes references on reports, articles, conference proceedings, monographs and unpublished materials. References are available in the official language(s) of the document.

- ESSENTIALS, a data base of occupational health and safety topics with references to readings selected by CCOHS subject specialists as necessary to acquire an understanding of the current knowledge on the topic. Information on the references appears in the official language(s) of the document.

- NOISE LEVELS, a data base containing noise level measurements based on actual work situations and related to different types of equipment and occupations in various industries. Data are taken from the results of measurements from both published and unpublished sources.

- STANDARDS AND DIRECTORIES, a data base providing a directory of standards, certified products' directories, PLUS products and other miscellaneous information products published by the CSA. Information presented in the data base includes preface, scope and table of contents for those standards concerned with occupational health and safety, electrical and mechanical mine safety, and environmental sciences.

- REGULATORY INFORMATION ON PESTICIDE PRODUCTS (RIPP), a data base of ready-to-use information identifying and describing products registered in Canada under the Pest Control Products (PCP) Act; produced by Agriculture Canada. Includes such information as product name, common and chemical names of active ingredients, and location of use and methods of application for a range of products, among them agricultural and forestry pesticides, wood preservatives, and disinfectants.

There are also a number of commercially-available toxicology data bases. They vary in their content, format and cost.[18,19,20,21] Such data bases are generally structured in either of two formats, bibliographic or fact retrieval. Of the bibliographic systems, TOXLINE (MEDLARS) is the largest and most widely used. The fact retrieval or data summary systems, however, would likely be more convenient for the use of an MOH (as opposed to a researcher). The Hazardous Substances Data Bank (MEDLARS), which contains pertinent toxicological detail and references on 4,100 chemical substances, may be the most appropriate single data source. The (RTECS) provides more research-oriented information, whereas Hazardline (BRS) and OHMTADS (CIS) contain greater detail on the environmental toxicity of chemical substances. A new fact retrieval data base, CESARS (CIS), though limited to 195 records at present, will become an excellent resource as its volume grows.

At present, online connection to these data bases through an office microcomputer is the most common method of toxicologic data retrieval.

However, compact disc technology can now enable the user with the appropriate hardware to have the data base on-site. A number of data bases, including CCINFOline of the Canadian Centre for Occupational Health and Safety, are presently available in this form. A client simply purchases an annual subscription to the service. With this technology, the user exchanges the cost of telecommunications for that of a piece of hardware. Such an option may be especially suitable for an agency that anticipates frequent demands for toxicological information.

Consultants

Even with access to extensive toxicology data banks, it is likely that the Medical Officer of Health will still periodically require the advice of a variety of consultants. It is not clear to whom an MOH will be encouraged to turn following introduction of community right-to-know legislation nor whether consultants will be readily available. It might seem natural for the MOH to seek advice within the provincial ministry of health, however, most such ministries across Canada presently employ few consultants with this expertise. The occupational physicians within the ministries of labour have a definite ability in this domain but they would have to be freed from other duties. Possibly a mechanism could be established to enable ready consultation between these two ministries. Other potential advisory bodies might include the Canadian Centre for Occupational Health and Safety, the university-affiliated occupational and environmental health units, and the ministries of the environment.

Educational Implications

Proposed community right-to-know legislation will demand expertise in areas not traditionally within the domain of the Medical Officer of Health. These include:

- an understanding of the principles of human and environmental toxicology,
- an ability to evaluate Material Safety Data Sheets and the toxicological literature,
- an understanding of the principles of risk assessment,
- a familiarity with measures of the flammability, reactivity, etc., of chemical substances,
- a greater understanding of chemical and industrial processes,
- an ability to use and interpret data from computerized data bases.

As public health widens its scope to include environmental and occupational issues, the preparatory training of Medical Officers of Health will need to emphasize these areas. For those presently in the field, however, consideration will have to be given to various forms of continuing medical education. This could include workshops, tele-medicine conferences and a regular information bulletin. Such activities might be coordinated by

provincial societies of Medical Officers of Health with technical assistance from the ministries of health and labour, university occupational health units and the Canadian Centre for Occupational Health and Safety.

Legal Implications

The role of the Medical Officer of Health in future community right-to-know legislation will raise several questions of a legal nature. These might include:

- whether there is an onus on the MOH to provide the inquirer with an interpretation of the inventory.
- whether the MOH will be liable for inaccurate or misleading advice.
- whether the MOH will be responsible for reviewing each and every inventory as it arrives in order to ensure health and safety in his community.

Although not addressed in this paper, these issues will need to be reviewed by the appropriate legal consultants to public health units and the ministries of health.

Financial Implications

There are clearly major cost implications of having the Medical Officer of Health serve as the agent for a community right-to-know policy. These costs may include the purchase of textbooks and computer hard and software, user fees for online data bases, the hiring of new personnel, and the retraining of present staff.

Cost estimates, based on predictions of demand for the service, need to be carefully prepared. Such predictions might be established through sample surveys of the client group and a review of the experience of other jurisdictions with similar legislation.

4. CONCLUSION

Community right-to-know legislation will likely be in place in a number of Canadian provinces within the next several years, and it is probable that the medical officers of health will be the agents through which community members will obtain information on workplace hazards. Although the political decisions to proceed with such a policy have been taken at several governmental levels, its implications are only beginning to be examined in detail.

In each province one might advise, therefore, the establishment of a working group to carry out such an examination and develop recommendations. Such a group might include representatives from the ministries of health, labour, and environment, the medical officers of health, the Canadian Centre for Occupational Health and Safety, and the general public.

Such a collaborative approach will be vital to the effective implementation of this important legislation.

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